

IN THE CLAIMS:

1.(Currently amended) A personal handyphone system performing radio connection using a time division multiple access-time division duplex system comprising:

a mobile station including

means for performing carrier sensing of a communication frequency designated by a base station and a reception slot; and

means for performing carrier sensing of a transmission slot prior to transmission of a signal to avoid collision wherein if the transmission slot is in use, the mobile station requests a different transmission slot assignment and a signal that was already in transit in said transmission slot is not stopped.

2.(Original) A personal handyphone system as set forth in claim 1, wherein said mobile station further comprises:

means for initiating communication when non use is judged in both carrier sensing.

3.(Original) A personal handyphone system as set forth in claim 1, wherein said mobile station further comprises:

means for initiating communication when non use is judged in both carrier sensing,

in carrier sensing of said reception slot and carrier sensing of said transmission slot, setting of reception electric field level as judgment condition of non use is provided individually to perform carrier sensing on the basis of each of said reception electric field levels.

4.(Original) A personal handyphone system as set forth in claim 1, wherein said mobile station further comprises:

means for initiating communication when non use is judged in both carrier sensing;

setting means for modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

said setting means setting said reception electric field level as non use judgment condition at an appropriate value corresponding to a reception electric field level of a control frequency and a control slot from said case station.

5.(Original) A personal handyphone system as set forth in claim 1, wherein said mobile station further comprises:

means for initiating communication when non use is judged in both carrier sensing;

setting means for modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

in carrier sensing of said reception slot and carrier sensing of said transmission slot, setting of reception electric field level as judgment condition of non use is provided individually to perform carrier sensing on the basis of each of said reception electric field levels,

setting means for modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

said setting means setting said reception electric field level as non use judgment condition at an appropriate value corresponding to a reception electric field level of a control frequency and a control slot from said case station.

6.(Original) A carrier sensing method on a mobile station side of a personal handyphone system performing radio connection using a time division multiple access-time division duplex system comprising:

in said mobile station,

performing carrier sensing of a communication frequency designated by a base station and a reception slot; and

performing carrier sensing of a transmission slot.

7.(Original) A carrier sensing method as set forth in claim 6, which further comprising the step of, in said mobile station,

initiating communication when non use is judged in both carrier sensing.

8.(Original) A carrier sensing method as set forth in claim 6, which further comprising the step of, in said mobile station,

initiating communication when non use is judged in both carrier sensing,

in carrier sensing of said reception slot and carrier sensing of said transmission slot, setting of reception electric field level as judgment condition of non use is provided individually to perform carrier sensing on the basis of each of said reception electric field levels.

9.(Original) A carrier sensing method as set forth in claim 6, which further comprising the step of, in said mobile station, initiating communication when non use is judged in both carrier sensing;

modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

setting said reception electric field level as non use judgment condition at an appropriate value corresponding to a reception electric field level of a control frequency and a control slot from said case station.

10.(Original) A carrier sensing method as set forth in claim 6, which further comprising the step of, in said mobile station, initiating communication when on use is judged in both carrier sensing;

modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

in carrier sensing of said reception slot and carrier sensing of said transmission slot, setting of reception electric field level as judgment condition of non use is provided individually to perform carrier sensing on the basis of each of said reception electric field levels,

modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

setting said reception electric field level as non use judgment condition at an appropriate value corresponding to a reception electric field level of a control frequency and a control slot from said case station.

11.(Original) A mobile station of a personal handyphone system performing ratio connection using a time division multiple access-time division duplex system comprising:

means for performing carrier sensing of a communication frequency designated by a base station and a reception slot; and

means for performing carrier sensing of a transmission slot.

12.(Original) A mobile station as set forth in claim 11, which further comprises:

means for initiating communication when non use is judged in both carrier sensing.

13.(Original) A mobile station as set forth in claim 11, which further comprises:

means for initiating communication when non use is judged in both carrier sensing,

in carrier sensing of said reception slot and carrier sensing of said transmission slot, setting of reception electric field level as judgment condition of non use is provided individually to perform carrier sensing on the basis of each of said reception electric field levels.

14.(Original) A mobile station as set forth in claim 11, which further comprises:

means for initiating communication when non use is judged in both carrier sensing;

setting means for modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

said setting means setting said reception electric field level as non use judgment condition at an appropriate value corresponding to a reception electric field level of a control frequency and a control slot from said case station.

15.(Original) A mobile station as set forth in claim 11, which further comprises:

means for initiating communication when non use is judged in both carrier sensing;

setting means for modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

in carrier sensing of said reception slot and carrier sensing of said transmission slot, setting of reception electric field level as judgment condition of non use is provided individually to perform carrier sensing on the basis of each of said reception electric field levels,

setting means for modifying and setting said reception electric field level as non use judgment condition in carrier sensing,

said setting means setting said reception electric field level as non use judgment condition appropriate value corresponding to a reception electric field level of a control frequency and a control slot from said case station.